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37. (NEW) A portable telephone terminal, comprising:
a Global Positioning System receiver;
an automatic responding unit responding to a call requesting current positioning information of the portable telephone terminal using the Global Positioning System; and
a sending unit automatically sending the current positioning information obtained by the Global Positioning System to a terminal sending the call requesting the current positioning information,
wherein a position of a first party holding said portable telephone terminal may be obtained by a second party holding another portable telephone terminal, and the positions of both the first party and the second party are displayed on the portable telephone terminal of the second party.

REMARKS

Claims 1-27, 32, and 33 are pending in this application and have been rejected. Claims 1, 10, 20, and 24 are have been cancelled in this response. Amendments to claims 2-9, 11-19, 21-23, 25-27, 32, and 33 are presented above. Claims 34-37 are newly added in this response. No new matter is being presented, and approval and entry are respectfully requested.

Rejections Under 35 U.S.C. §112, Second Paragraph

The Examiner rejected claims 3-5 and 12-14 as being indefinite. Applicant submits that amendments to the claims presented above provide the required definiteness. Accordingly, Applicant respectfully requests withdrawal of the rejections to the claims under §112.

Rejections Under 35 U.S.C. §§ 102 and 103

The Examiner rejected claims 1, 10, 32, and 33 under 35 U.S.C. §102(b) as being anticipated by Schuchman et al. (U.S. Patent No. 5,422,813).

The Examiner rejected claims 1, 3, 10, 12, 20, 32, and 33 under 35 U.S.C. §102(b) as being anticipated by FitzGerald et al. (U.S. Patent No. 5,420,594).

The Examiner rejected claims 1, 3, 4, 10, 12, 13, 20, 23, 24, 32, and 33 under 35 U.S.C. §102(e) as being anticipated by Bruno et al. (U.S. Patent No. 5,604,765).

The Examiner rejected dependent claims 2, 11, 19, and 25 under 35 U.S.C. §103(a) as being unpatentable over Bruno.

The Examiner rejected dependent claims 6-9, 15-18, 21, 22, 26, and 27 under 35 U.S.C. §103(a) as being unpatentable over Bruno in view of Obradovich et al. (U.S. Patent No. 6,148,261).

Applicant respectfully traverses these rejections for the reasons presented below.

The References

Schuchman et al. Schuchman relates to a no outage GPS/AM position finding system. In Schuchman, a cellular telephone is carried with a mobile GPS receiver, traveling in range of a plurality of ground-based AM transmitters. An AM position signal is used for positioning if GPS signals are unavailable. See Schuchman at abstract.

FitzGerald et al. FitzGerald relates to a multi-mode position location method that detects the location of movable detection devices attached to movable carriers in a simulated battlefield using three position location modes (FigzGerald at abstract).

Bruno et al. Bruno relates to position determination via broadcast of RF navigation signals. Bruno uses a cellular telephone system having three or more cell sites. A direct sequence spread spectrum waveform carrying navigation signals is embedded in the cellular communication signals. Each cell site times the operation of a GPS receiver. See Bruno at abstract and col. 2, lines 14-16.

Obradovich et al. Obradovich relates to communicating and retrieving position and position-related data. Obradovich comprises personal communications devices (PCDs) and computer systems with GPS engines, routers, and other application programs to request, process, and transmit tagged GPS encoded information. See Obradovich at col. 1, lines 8-10 and col. 2, lines 11-15.

The Present Claimed Invention Distinguishes Over the Prior Art

Claim 32 of the present invention specifies a position information management system comprising an information terminal that receives position information from a plurality of different kinds of positioning systems, wherein a position of a first party holding an information terminal may be obtained by a second party holding another information terminal, and the positions of both the first party and the second party are displayed on the second party's information terminal. Independent claims 33-37 recite similar language.

Referring to Fig. 6 of the present invention, each information terminal continually acquires its current position using the positioning systems. The current position is periodically sent to a central system, where it is logged. If a second party having an information terminal wants to know the position of a first party holding his or her own information terminal, the second party requests the central system to obtain the position of the first party. The central system requests the first party's portable terminal to transmit a signal indicating its current position to the central system, which forwards the position information to the second party's information terminal. The second party's information terminal obtains its own current position. The positions of both the first party and the second party are displayed on a map displayed on the second party's information terminal. If the central system is unable to communicate with the first party, the central system estimates the current position of the first party using the logged speed and direction of the first party. Thus, a second party, such as a parent, may be able to quickly determine the location of a child who, for example, becomes lost in a crowd.

The Schuchman reference relates to an automobile positioning system using GPS and AM signals when receipt of GPS signals is impaired (Schuchman at col. 1, lines 18-25). The FitzGerald reference relates to a multi-mode positioning system using the GPS and a multilateration system (FitzGerald at col. 1, lines 5-9 and 37-51). The Bruno reference relates to a positioning system using the GPS system, GPS-like signals broadcast at an alternative frequency, and GPS-like RF signposts (Bruno at col. 2, lines 14-19). The Obradovich reference relates to a personal communication device (PCD) having a GPS receiver and a display, and receiving maps and location tagged data from data providers (Obradovich at abstract).

While the references may provide positioning systems, the references do not disclose one person carrying an information terminal or portable telephone requesting the location of another person carrying another information terminal/portable telephone, and displaying the locations of both persons on the requesting person's information terminal/portable telephone. Therefore, it is submitted that independent claims 32-37 patentably distinguish over the prior art.

As for the dependent claims, the dependent claims depend from the above-discussed independent claims and are patentable over the prior art for the reasons discussed above.

New Claims

Claims 34-37 are newly added with this response to alternatively define the present invention. Similar to claim 32, claims 34-37 specify that a position of a first party holding a portable telephone or information terminal may be obtained by a second party holding another portable telephone/information terminal. These features are not taught or suggested by the cited references. Thus, for at least the reasons presented above, Applicant submits claims 34-37 patentably distinguish over the prior art. Accordingly, Applicant respectfully requests allowance of the new claims.

CONCLUSION

It is submitted that none of the references, either taken alone or in combination, teach the present claimed invention. Thus, claims 2-9, 11-19, 21-23, 25-27, and 32-37 are deemed to be in a condition suitable for allowance. Reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

Finally, if there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 2/13/02

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Please **AMEND** the following claims:

2. (ONCE AMENDED) The [position information management] portable telephone system as set forth in claim [1] 34, wherein said [information] portable telephone terminal [includes] further comprises a built-in device which detects a moving direction and a moving speed of said [information] portable telephone terminal, [and even when all of said positioning systems] wherein if the Global Positioning System [have become] becomes unavailable, said [information] portable telephone terminal independently detects and displays its current position.

3. (TWICE AMENDED) The [position information management] portable telephone system as set forth in claim [1] 34, wherein [a third party can acquire] a position of a first party holding [a holder of] said [information] portable telephone terminal may be obtained by a second party through the central system.

4. (ONCE AMENDED) The [position information management] portable telephone system as set forth in claim 3, wherein the [third] second party [is the holder of said information] holds another portable telephone terminal.

5. (THREE TIMES AMENDED) The [position information management] portable telephone system as set forth in claim 3, wherein a movement of the current position of the [holder of said information terminal] first party is supervised, and when the [holder of said information terminal] first party has not moved from an identical site for a predetermined time period, an alarm is raised upon a judgment that an unusual situation has occurred to the [said holder] first party.

6. (TWICE AMENDED) The [position information management] portable telephone system as set forth in claim [1] 34, wherein said [information] portable telephone terminal transmits position information of a destination to the central system, thereby to automatically download map data of an appropriate scale from the [said] central system on demand, the map data containing the current position of said [information] portable telephone terminal and a

position of the destination, and to display the map data.

7. (ONCE AMENDED) The [position information management] portable telephone system as set forth in claim [1] 34, wherein said [information] portable telephone terminal retains minimum map data of a region in which a holder thereof wants to move, in the form of an IC card.

8. (TWICE AMENDED) The [position information management] portable telephone system as set forth in claim [1] 34, wherein said [information] portable telephone terminal retains map data downloaded from the central system for a certain period of time, and when the map data is needed again, it is searched for from within the map data retained in said [information] portable telephone terminal and is displayed.

9. (ONCE AMENDED) The [position information management] portable telephone system as set forth in Claim 8, wherein said [information] portable telephone terminal sets a time period for retaining map data of higher use frequency, to be longer than a certain period of time.

11. (TWICE AMENDED) The [information terminal] portable telephone as set forth in claim [10] 35, further comprising a built-in device which detects a moving direction and a moving speed of said [information terminal] portable telephone, and wherein [even when all of said positioning systems] if the Global Positioning System [have become] becomes unavailable, said [information terminal] portable telephone independently determines and displays its current position.

12. (ONCE AMENDED) The [information terminal] portable telephone as set forth in claim [10] 35, wherein [a third party can acquire] the position of a [holder of] first party holding said [information] portable telephone may be obtained by a second party [terminal] through the central system.

13. (ONCE AMENDED) The [information terminal] portable telephone as set forth in claim 12, wherein the [third] second party [is the holder of said information] holds another portable telephone [terminal].

14. (TWICE AMENDED) The [information terminal] portable telephone as set forth in claim 12, wherein a movement of the current position of the [holder of said information terminal] first party is supervised, and when the [said holder of said information terminal] first party has not moved from an identical site for a predetermined time period, an alarm is raised upon a judgment that an unusual situation has occurred to the [holder] first party.

15. (TWICE AMENDED) The [information terminal] portable telephone as set forth in claim [10] 35, wherein said [information terminal] portable telephone transmits position information of a destination to the central system, thereby to automatically download map data of an appropriate scale from the central system on demand, the map data containing the current position of said [information] portable telephone terminal and a position of the destination, and to display the map data.

16. (ONCE AMENDED) The [information terminal] portable telephone as set forth in claim [10] 35, wherein said [information terminal] portable telephone retains minimum map data of a region in which a holder thereof wants to move, in the form of an IC card.

17. (TWICE AMENDED) The [information terminal] portable telephone as set forth in claim [10] 35, wherein said [information] portable telephone terminal retains map data downloaded from the central system for a certain period of time, and when the map data is needed again, it is searched for from within the map data retained in said [information terminal] portable telephone and is displayed.

18. (ONCE AMENDED) The [information terminal] portable telephone as set forth in claim 17, wherein said [information terminal] portable telephone sets a time period for retaining map data of higher use frequency, to be longer than a certain period of time.

19. (TWICE AMENDED) The [information terminal] portable telephone as set forth in claim [10] 35, wherein [said information terminal is a terminal of a portable telephone type,] in [which] the portable telephone, an antenna for the Global Positioning System [positioning systems] is disposed in a cover for an input button portion of said [information terminal] portable telephone.

21. (TWICE AMENDED) The portable [radio] telephone terminal as set forth in claim [20] 37, further comprising a display unit displaying a map which contains a destination, on the basis of position information of the destination.

22. (THREE TIMES AMENDED) The portable [radio] telephone terminal as set forth in claim 21, wherein the display unit displays a map of an appropriate scale containing the current position of the portable [radio] telephone terminal and [said] the destination.

23. (TWICE AMENDED) The portable [radio] telephone terminal as set forth in claim [20] 37, further comprising:

an acquiring unit [connected to additional equipment, for] acquiring position information of a [third] first party holding said portable telephone terminal; and

an outputting unit outputting the acquired position information of the [third] first party.

25. (TWICE AMENDED) The portable [radio terminal] telephone as set forth in claim [24] 35, wherein an antenna for said [position information acquisition unit] Global Positioning System is disposed in a cover for an input button portion of said portable [radio] telephone [terminal].

26. (TWICE AMENDED) The portable [radio terminal] telephone as set forth in claim [24] 35, further comprising a display unit displaying a map which contains the acquired current position of said portable [radio terminal of the third party] telephone.

27. (THREE TIMES AMENDED) The portable [radio terminal] telephone as set forth in claim 26, wherein [said] the display unit displays a map of an appropriate scale containing a current position of said portable [radio terminal] telephone itself and the [said] current position of [said] another portable [radio terminal of the third party] telephone requesting the current positioning information of the portable telephone.

32. (ONCE AMENDED) A position information management system, comprising:
an information terminal receiving position information from a plurality of different kinds of positioning systems, each positioning system having its own radio equipment and using corresponding radio waves to determine the position of said information terminal; and

a controller automatically changing from an unavailable one of the positioning systems to an available one of the positioning systems,

wherein a position of a first party holding said information terminal may be obtained by a second party holding another information terminal, and the positions of both the first party and the second party are displayed on the information terminal of the second party.

33. (ONCE AMENDED) A method for managing position information, comprising:
receiving position information by an information terminal from a plurality of different kinds of positioning systems, each positioning system having its own radio equipment and using corresponding radio waves to determine the position of the information terminal; and
automatically changing from an unavailable one of the positioning systems to an available one of the positioning systems,

wherein a position of a first party holding the information terminal may be obtained by a second party holding another information terminal, and the positions of both the first party and the second party are displayed on the information terminal of the second party.

Please **ADD** the following new claims:

34. (NEW) A portable telephone system managing position information of a portable telephone, comprising:

a portable telephone terminal; and

a central system comprising:

a request receiving unit receiving a request for position information of the portable telephone terminal,

a position information acquiring unit acquiring current position information of the portable telephone terminal by calling the portable telephone terminal, if the portable telephone terminal is able to receive a call, or by retrieving position information that is registered beforehand, if the telephone terminal is unable to receive a call,

wherein said portable telephone terminal comprises:

a Global Positioning System receiver,

an automatic responding unit responding to a call requesting current positioning information of the portable telephone terminal using the Global Positioning System,
and

a position registering unit registering position information periodically with the central system, and

wherein a position of a first party holding said portable telephone terminal may be obtained, through the central system, by a second party holding another portable telephone terminal, and the positions of both the first party and the second party are displayed on the portable telephone terminal of the second party.

35. (NEW) A portable telephone having a position managed through a central system, comprising:

a Global Positioning System receiver,

an automatic responding unit responding to a call requesting current positioning information of the portable telephone using the Global Positioning System; and

a position registering unit registering the position information periodically with the central system,

wherein a position of a first party holding said portable telephone may be obtained, through the central system, by a second party holding another portable telephone, and the positions of both the first party and the second party are displayed on the portable telephone of the second party.

36. (NEW) A central system managing position information of a portable telephone, comprising:

a request receiving unit receiving a request for position information of a portable telephone terminal; and

a position information acquiring unit acquiring a current position information of the portable telephone terminal by calling the portable telephone terminal if the portable telephone terminal is able to receive a call, or by retrieving position information that is registered beforehand if the telephone terminal is unable to receive a call,

wherein a position of a first party holding said portable telephone may be obtained, through said central system, by a second party holding another portable telephone, and the positions of both the first party and the second party are displayed on the portable telephone of the second party.

37. (NEW) A portable telephone terminal, comprising:

a Global Positioning System receiver;
an automatic responding unit responding to a call requesting current positioning information of the portable telephone terminal using the Global Positioning System; and
a sending unit automatically sending the current positioning information obtained by the Global Positioning System to a terminal sending the call requesting the current positioning information,

wherein a position of a first party holding said portable telephone terminal may be obtained by a second party holding another portable telephone terminal, and the positions of both the first party and the second party are displayed on the portable telephone terminal of the second party.